NANYANG TECHNOLOGICAL UNIVERSITY
DISCOVER SCIENCE @ NTU

Asian School of the Environment
School of Biological Sciences
School of Physical and Mathematical Sciences
www.cos.ntu.edu.sg
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Welcome to the College of Science (CoS) at the Nanyang Technological University (NTU Singapore). The College is home to the Asian School of the Environment, the School of Biological Sciences, and the School of Physical and Mathematical Sciences, which itself comprises the Divisions of Chemistry, Physics and Mathematics. A young and nimble institution, the College has established a leading international reputation and provides a world-class research and education environment, addressing contemporary areas of today’s science.

We are a truly interdisciplinary college. Most members of our remarkable Faculty cross two or more domains – for example, we have biologists researching food science, chemists creating new materials, mathematicians making impact in computer science, physicists working in financial engineering, geoscientists working on societal impacts of climate change.

We are devoted to scholarship, advancing scientific knowledge through research and education. Our research strengths are acknowledged in international rankings, and we are leveraging our intellectual scientific strengths to address problems of major societal concern. Peaks of research excellence address sustainable Earth, global Asia, secure communities, healthy society, quantum science and future learning, all important in national and global future research strategies.

The degree programmes within the College are also known for the quality of their graduates. CoS students and graduates have gained admission to top graduate schools around the world, including MIT, Harvard, UC Berkeley, and University College London. Our graduates are highly sought by top employers such as Bloomberg, BP, Citibank, GlaxoSmithKline, Google, and Singapore Airlines.

I welcome you and invite you to visit, to discover for yourself the remarkable ecosystem of research and education that is the College of Science.

Professor Simon Redfern
Dean, College of Science
The Asian School of the Environment (ASE) at NTU is an interdisciplinary School and world leader in environmental research focused on Asian environmental challenges. Our School integrates earth and environmental life science, ecology, engineering and technology, human ecology, humanities, and the social sciences to address key issues of the environment and sustainability.
ENVIRONMENTAL EARTH SYSTEMS SCIENCE (EESS)

The Environmental Earth Systems Science Major is the flagship programme of the ASE. This highly selective programme, favours a small cohort, creating an innovative and interactive learning environment. Students who choose this major will gain a strong background in quantitative skills, modern computing techniques, core environmental earth systems, maths, and sciences.

DOUBLE MAJOR: ENVIRONMENTAL EARTH SYSTEMS SCIENCE AND PUBLIC POLICY AND GLOBAL AFFAIRS (ESPP)

ESPP is a double major programme, combining courses from ASE and School of Social Sciences. Students admitted to this multidisciplinary course will develop a strong background in quantitative environmental earth systems science and communication, public affairs, and international relations. The joint programme will give students the opportunity to build complementary skills in leadership, group work, and innovative problem-solving, empowering the next generation of public policy makers with the tools required to face the challenges of today’s rapidly changing world.
Our graduates are prepared with diverse skillsets and knowledge to fill a wide array of both public and private sector positions or to pursue graduate programmes. Our graduates have job opportunities in Singapore, Southeast Asia as well as further afield, and are prepared to tackle the environmental challenges of the 21st Century.

**PUBLIC SECTOR**
- Foreign and domestic policy
- Government roles in Environmental Planning, Policy and Management
- Water resource management or hydrogeology
- Teaching

**PRIVATE SECTOR**
- Natural resource exploration, extraction, and management (oil, gas, and minerals)
- Environmental consulting
- Geotechnical consulting
- Geologic surveying or monitoring

**BUSINESS AND SUSTAINABILITY**
- Businesses or corporations that value technical knowledge, creative problem solving and leadership ability when dealing with changing environmental policy and the global move towards improved global sustainability practices
- Sustainability reporting

**ENVIRONMENT AND CONSERVATION**
- Academic research
- Environmental media and journalism
- Non-Government Organizations and Volunteer-Welfare Organizations such as WWF, Nature’s Society or Birdlife
- International Governance such as World Food Bank or UNESCO

**ENTREPRENEURSHIP AND FINANCE**
- Where firms seek quantitative knowledge about the science that drive changes in the energy market.
- Reinsurance companies, who rely on a balance of earth science data and policy intuition to help assess long-term risk

**POSTGRADUATE STUDIES**
SCHOOL OF BIOLOGICAL SCIENCES

A cutting-edge global education in biomedical and life sciences await every student in the School of Biological Sciences (SBS). Stimulating and challenging, our curricula bolster our students’ aptitudes to meet the demands of the biomedical and healthcare industries when they step into the working world. Supported by a team of faculty members hailing from over 20 countries, our students will have a better understanding of the global perspectives of these industries.

At SBS, we are committed towards providing top-quality tertiary education for our students both in and beyond the classrooms using modern pedagogical approaches, hands-on research and industrial internships. Students will be able to benefit from a curriculum that is constantly updated in accordance with market needs, taught by a community of research-active faculty. In addition, students will also be equipped with essential data science skills, allowing them to be at the forefront of the new digital economy in Biology.

For an exciting taste of hands-on research, students can join the Undergraduate Advanced Experimental Biology workshops. There, they will learn about life as researchers, hone lab skills for their future careers, get glimpses into the latest biological advancements and more.

The implementation of compulsory internship for all students in their third year of study also provides them the opportunity to obtain first-hand experience in the real world, giving them a competitive edge as they enter the workforce, enhancing the possibility of securing a job after graduation. Students can further sharpen their professional skills by attending Professional Career Development courses, work closely with the school’s Career Coach as well as attend our Alumni Career Sharing events to find out more.
The study of biology is highly relevant to everyday life. As the knowledge base in the biological sciences grows exponentially and technology becomes ever more sophisticated, the ability to think broadly about biology and application of knowledge across boundaries of disciplines will inevitably become a very valuable and powerful asset in both the scientific environment and many walks of life. We aim to provide support and resources for students to achieve their potential while celebrating the study of life. This programme will prepare them for a variety of career options, as the curriculum covers specialized and advanced topics in stem cells, cancer biology and therapy, physiology, evolutionary biology, neuroscience, amongst others. Implementation of compulsory internship might also enhance the possibility of securing a job after graduation. Students will also be equipped with programming, computational thinking and other essential data science skills relevant to biological data, enhancing digital literacy in their future career. Interested students may also opt to take on a business minor under this programme.

Structural biology has gained importance in the biomedical field, with an increasing impact on healthcare and medicine. Students of this interdisciplinary programme will undertake courses related to areas of study in structure-based discovery, structure-based vaccine design, structure-based design of biologics, structure-based design of novel biomaterials and structure-based design of protein engineering.
BACHELOR OF SCIENCE (HONOURS) IN BIOLOGICAL SCIENCES WITH SECOND MAJOR IN FOOD SCIENCE AND TECHNOLOGY

Conducted in partnership with the Wageningen University (The Netherlands), NTU School of Chemical and Biomedical Engineering and School of Physical and Mathematical Sciences, this is a popular programme introduced in 2013. Students with an interest in biology who also wish to gain an understanding about food processes through an engineering and industrial point of view will benefit from the interdisciplinary nature of this unique programme.

BACHELOR OF SCIENCE (HONOURS) IN BIOLOGICAL SCIENCES WITH SECOND MAJOR IN MEDICINAL CHEMISTRY AND PHARMACOLOGY

Conducted in partnership with the Division of Chemistry and Biological Chemistry at the NTU School of Physical and Mathematical Sciences, students of this interdisciplinary programme will be cross-trained in biological sciences and chemistry. Providing a good foundation for students to embark on the area of chemical biology and pharmacology for research and development, students will not only be well equipped with knowledge in both disciplines, but will also be equipped with the relevant skill-sets to embark on careers in biomedical and pharmaceutical research and development.

DOUBLE MAJOR: BACHELOR OF SCIENCE (HONOURS) IN BIOLOGICAL SCIENCES AND PSYCHOLOGY

Eligible for the NTU-Duke-NUS Medicine Pathway

In collaboration with the School of Social Sciences, this inter-disciplinary programme offers students the opportunity to specialize in two major academic disciplines from both Schools. Students will be equipped with transferrable skills of a combined education for successful careers in this rapidly changing environment.

In Singapore, the increased level of stress encountered by its population over the years led to a growing emphasis on the awareness of mental health as well as an increase in demand for professionals with an interdisciplinary training in Psychology. Students with a curiosity in areas such as human emotions, behaviors and thoughts can now adopt a more integrated approach towards understanding it as the programme offers a more consistent depth in both disciplines.
BACHELOR OF SCIENCE (HONOURS) IN BIOMEDICAL SCIENCES AND BIOBUSINESS

Eligible for the NTU-Duke-NUS Medicine Pathway

In collaboration with the Copenhagen Business School and Nanyang Business School, students will be provided a unique opportunity to be cross-trained in biomedical sciences/biotechnology and business/management with relevance to the biomedical/healthcare sector in Singapore and Southeast Asia. This includes biomedical manufacturing operations management and regulatory matters relating to biomedical and healthcare industry.

Immersion components are further included as an integral structure of this programme where the foundational knowledge and skills will be strengthened through professional internship in various business departments at multinational pharmaceutical, biotechnology and medical technology companies as well as local healthcare institutions. The learning loop will then be closed through a final year project in the final semester. They can fully explore and synthesize the theoretical knowledge and internship experience in a biobusiness-related project, or participate in laboratory-based biomedical science research prior to understanding the relevance of research and development for bio-products in the industry.

*NEW!

NTU-DUKE-NUS MEDICINE PATHWAY

This track provides motivated individuals the opportunity to develop their entrepreneurial aspirations in the medical field through a myriad of engagement activities.

Successful students will graduate with a Bachelor of Science (Honours) in Biological Sciences and Psychology / Bachelor of Science (Honours) in Biomedical Sciences and BioBusiness at Nanyang Technological University (NTU Singapore), followed by a Doctor of Medicine (MD) degree at the Duke-NUS Medical School.
Students graduating from SBS will have a good set of career options ahead. A career as a medical doctor, veterinarian or research scientist, amongst others are popular routes taken by our graduates.

Our graduates are well sought after in hospitals, research institutes, government agencies, education institution and forensic departments in the public sectors. Not forgetting the commercial sectors who actively seek out life sciences graduates, including the pharmaceutical, biotechnology, food, water and agricultural industries for roles such as process engineers, biotechnologist, QA specialist and clinical researcher.

There is also a demand for life sciences graduates for contribution to the public understanding of science in the form of journalists, scientific writers and information/ liaison officers. In the financial and legal sectors, they require analysts with life science knowledge for risk assessments, patents for molecular biology and biotechnology used for drug and medical applications. There is also the option of undertaking a postgraduate qualification at the National Institute of Education (NIE) for entry into the teaching profession.

Graduates with a Double Degree in Biomedical Sciences and Chinese Medicine are well positioned to consider careers in both life sciences/biomedical sciences and the Chinese Medicine industry. Majority of the graduates are employed as Chinese Medicine Physicians (subject to passing the Singapore Chinese Medicine Practitioners' Board Exam) as well as management and administration positions in Healthcare organizations and clinics, just to name a few. We also have some graduates currently pursuing higher degree (Masters) in Chinese Medicine or research as Ph.D. students at local universities.

DOUBLE DEGREE:
BACHELOR OF SCIENCE (HONOURS) IN BIOMEDICAL SCIENCES
BACHELOR OF CHINESE MEDICINE

This unique five-year double degree programme is an amalgamation of the western approach to Biomedical Sciences with Traditional Chinese Medicine (TCM). The Bachelor of Science (Honours) in Biomedical Sciences is conferred by NTU and the Bachelor of Medicine (Chinese Medicine) is conferred by the Beijing University of Chinese Medicine (BUCM). The first three years of the double degree programme are taught at NTU, while the final two years are taught at BUCM in Beijing. This is a bilingual course with English and Mandarin as the medium of instruction. Students will learn aspects of biomedical sciences such as genetics, molecular & cell biology, immunology as well as TCM diagnostics, medication, acupuncture and moxibustion.
POSSIBLE CAREER OPTIONS

HEALTHCARE
Eu Yan Sang, Jurong Health, Kin Teck Tong TCM Clinic, KK Women’s & Children’s Hospital, Singapore General Hospital, Tan Tock Seng Hospital
E.g. Acupuncturist, Clinical Researcher, Healthcare Operations Executive, Hospital Executive, Management Associate, Pharmaceutical Sales, Physician, etc.

BANKING, FINANCE & LEGAL
Bank of America Merrill Lynch, Citibank, DBS Bank, Deloitte & Touche, Drew & Napier LLC, Moody’s Singapore
E.g. Fixed Income Trader, Management Associate, Patent Officer, Relationship Manager, Risk Consultant, Tax Consultant, Vice-President, etc.

ENTREPRENEURS
AiTreat Pte Ltd, Archisen, BlazeRidge, In Vitro Pte Ltd, TCMTREND
E.g. Owner of Bio JD Printing Company, Owner & Physician of TCM Clinic, etc

BIOMEDICAL & PHARMACEUTICAL
Amgen, AstraZeneca, GlaxoSmithKline, Johnson & Johnson, Lonza Biologics, Novartis Biopharma Operations
E.g. Manufacturing Biotechnologist, Process Engineer, QA Specialist, Research & Development Officer, Validation Engineer, etc.

PUBLIC SECTOR
Agency for Science, Technology and Research (A*STAR), Genome Institute of Singapore (GIS), Institute of Molecular & Cell Biology (IMCB), KK Women’s & Children’s Hospital, Ministry of Education, Ministry of Health, National Environment Agency, Singapore Police Force, SingHealth
E.g. Forensic Specialist, Gynaecologist, Health Policy Analyst, Laboratory Management, Project Officer, Research Officer, etc.

POSTGRADUATE STUDIES
Cambridge University, Duke-NUS Medical School, Karolinska Institutet, Nanyang Technological University, Oxford University, University of Edinburgh
E.g. Medical Student, MSc & Ph.D. Student, etc.

OTHERS
E.g. Communication Accounts Executive, Education Officer, Marketing Associate (Events), Scientific Journalist, Scientific Writer Service Executive, etc.
The School offers eight 3–4 year Bachelor of Sciences (Honours) programmes that bring students up to the latest frontiers of science and technology.

Our programmes cover the fundamental scientific disciplines of chemistry, physics, and mathematics, as well as modern interdisciplinary topics such as nanotechnology and machine learning.

Our students are taught and mentored by faculty members who are global leaders in cutting-edge research topics, and our state-of-the-art scientific facilities provide an excellent environment for research and education.

**BACHELOR OF SCIENCE (HONOURS) IN CHEMISTRY AND BIOLOGICAL CHEMISTRY**

Students are offered a direct honours programme that satisfies the American Chemical Society curricular guidelines for a rigorous professional education in chemistry. In addition to the core contents, students may also opt for concentrations in areas of Food Science and Technology, and Medicinal Chemistry. Plenty of enrichment courses are available, such as Forensic Science, Impact of Chemistry on Society and many more.
Highly selective interdisciplinary programme offered in partnership with the Asian School of the Environment (ASE) and the School of Civil and Environmental Engineering (SCEE). Designed to train chemistry majors in the principles of environmental science and environmental resource management. Graduates are well-placed for employment in environmental consultancies, regulatory agencies, and the chemical industry. Some courses are offered by ASE and SCEE, covering areas such as Climate Change, Environmental Sustainability, Biogeochemistry, Air Quality Management and many more.

**BACHELOR OF SCIENCE (HONOURS) IN CHEMISTRY AND BIOLOGICAL CHEMISTRY WITH SECOND MAJOR IN ENVIRONMENTAL SCIENCE**

The Food Science and Technology Second Major programme is a collaboration between NTU and the prestigious Wageningen University from the Netherlands, whose Food Technology programme is considered one of the best and most innovative in Europe. It builds upon three of NTU’s existing BSc/ BEng programmes in which students will be awarded a certificate for the Second Major upon graduation.

**CAREER PROSPECTS**

Chemistry graduates can find ready employment in a wide range of chemical-related industries in Singapore and overseas. These include the biomedical and pharmaceutical industries, the petrochemical industries, polymer/paint/semiconductor industries and the food and beverage industry. A*STAR research institutes and other public sector agencies such as the Health Sciences Authority and DSO National Laboratories are also eager employers. Other chemistry graduates have chosen a career in education, taking up the challenge of shaping the minds of the next generation.
BACHELOR OF SCIENCE (HONOURS) IN PHYSICS

The Physics degree equips students with the analytical, computational, and experimental skills for working at the frontiers of science and technology. Emphasis is placed on fundamental theories and concepts, with courses in advanced quantum mechanics, condensed-matter physics, particle physics, computational physics, and more. Students may also opt for a course concentration in Nanotechnology.

BACHELOR OF SCIENCE (HONOURS) IN APPLIED PHYSICS

Applied Physics is a discipline that specializes in finding technological applications for the latest discoveries in physics. Students majoring in Applied Physics are exposed to cutting-edge topics such as nanotechnology, microfluidics, photonics, plasmonics, and laser physics. Students may also opt for course concentrations in Nanotechnology, Optical Technology, Semiconductor Technology, or Biophysics.

*NEW!

BACHELOR OF SCIENCE (HONOURS) IN APPLIED PHYSICS WITH SECOND MAJOR IN MICROELECTRONICS ENGINEERING

With the vision to transform Singapore into a smart nation, there is a great demand for microelectronic devices of all kinds, ranging from optical sensors to low-power processors. This new programme, launched in partnership with the School of Electrical and Electronic Engineering (EEE), combines modern applications of microelectronics technology with a deep understanding of the underlying physics. Graduates are well placed for jobs in developing the next generation of consumer and industrial electronic devices.
This programme is intended for students interested in research careers requiring strong computational and problem-solving skills, and students pursuing postgraduate degrees in Physics, Mathematics, or related subjects. The curriculum equips students with an understanding of physical world through mathematical rigour and insights. It covers courses at the interface of Physics and Mathematics such as Differential Geometry, Algebraic Topology, Quantum Mechanics, General Relativity.

This programme offers a good mix of fundamental, as well as the applied, computational, and the industrial aspects of Mathematics and Statistics. Students undergo 18 months of foundational courses; thereafter they will choose their specialisations either in the Statistics stream, the Pure Mathematics stream the Applied Mathematics stream or the Business Analytics stream. The emphasis of this degree lies in breadth, flexibility and relevance.

CAREER PROSPECTS

Physics and Applied Physics graduates have a wide range of career choices. Our curriculum emphasizes creativity, active collaboration and effective communication, along with exposure to research and work attachments. Our graduates have gone on to careers with semiconductor companies, optics and scientific equipment manufacturers, telecommunications companies, quantitative finance firms, research and development (R&D) institutes, academia, and education.

BACHELOR OF SCIENCE (HONOURS) IN MATHEMATICAL SCIENCES

This programme offers a good mix of fundamental, as well as the applied, computational, and the industrial aspects of Mathematics and Statistics. Students undergo 18 months of foundational courses; thereafter they will choose their specialisations either in the Statistics stream, the Pure Mathematics stream the Applied Mathematics stream or the Business Analytics stream. The emphasis of this degree lies in breadth, flexibility and relevance.

BACHELOR OF SCIENCE (HONOURS) IN MATHEMATICAL SCIENCES WITH MINOR IN FINANCE

The use of mathematical methods has now become widespread in all areas of finance and economics, and the Minor in Finance in addition to a Major in Mathematical Sciences is designed to respond to this demand and to give an edge to the mathematics student. This Minor is offered by the Nanyang Business School, exclusively to selected Mathematical Sciences students to take additional courses in Banking and Finance.

DOUBLE MAJOR: BACHELOR OF SCIENCE (HONOURS) IN MATHEMATICAL SCIENCES AND ECONOMICS

This highly interdisciplinary programme, in partnership with the School of Social Sciences, shapes our students into individuals with the skills most sought-after by the financial services industry. Other than the common foundational courses, the emphasis in the later study of Mathematics is the numerical computational and statistical methods. For Economics, quantitative techniques and the fundamental economic concepts are emphasised. This programme provides students with strong interdisciplinary skillsets. With a strong background in statistics and economics, graduates from this programme will also find themselves well prepared for further studies in Economics.
DOUBLE MAJOR:

BACHELOR OF SCIENCE (HONOURS) IN MATHEMATICAL AND COMPUTER SCIENCES

This programme aims to attract top students who can master the technically demanding disciplines from both schools. Graduates from the programme are expected to either be ICT leaders and entrepreneurs in fast developing areas such as Financial Technology, Cybersecurity, and Data Analytics, or pursue postgraduate degrees in Mathematics and Computer Science related disciplines. The programme provides students with strong foundations in their two majors with core courses, and in-depth specialized training in one of four areas at the interface of Mathematical Sciences and Computer Science—Theoretical Computer Science, Cryptography and Cybersecurity, Financial Modelling, and Data Science. Finally, the programme ends with a Professional Internship and a Final Year Project.

BACHELOR OF SCIENCE (HONOURS) IN DATA SCIENCE AND ARTIFICIAL INTELLIGENCE

This programme equips students with strong foundation in mathematics, statistics and computer science and prepares them for a career in the rapidly expanding field of data science and artificial intelligence (AI) as data scientists or AI scientists.

Students will study core courses in Mathematical Sciences and well as Computer Sciences to build up foundation and develop interdisciplinary insights. In the later part of the programme, students will deepen their understanding by reading more advanced topics such as optimization, regression analysis, high dimensional statistics, data mining machine learning and cryptography. Riding on the wealth of NTU’s strong collaboration with the industry, students will also benefit from participation in internship and industry oriented research projects.
Mathematics graduates often play a leading role in fields as diverse as finance, IT, biotechnology, and many others. Attesting to the versatilities of mathematical training, it is very common for mathematicians to obtain jobs with titles like “Risk Analyst”, “actuary”, “Clinical Trials Manager”, “Epidemiologist” and countless others. Mathematics gives you a superb foundation for later specialization, and a set of analytical skills that would be valued by any employer.

As the demand for data science and artificial intelligence (DSAI) specialists is growing rapidly, DSAI graduates can expect a rewarding career as a data science expert of an AI specialist across various sectors, ranging from government agencies such as healthcare and transportation authorities, to industry players such as e-commerce, infocomm and financial services sector.
KICK-START YOUR CAREER WITH CAREER & ATTACHMENT OFFICE

BE FUTURE-READY WITH NTU CAREER & ATTACHMENT OFFICE

Get a head start on career planning through personalised career-coaching, industry-specific consultations, experiential career skills workshops, as well as company and educational visits.

In today’s global and dynamic economy, the spot for top jobs remain highly competitive. To get noticed by employers and land your dream job, you will need the right career skills, guidance and networks.

The Career & Attachment Office (CAO) has excellent connections with over 3500 global and local organisations, including MNCs, SMEs, Public Service Ministries and Agencies. This enables us to facilitate meaningful internships and quintessential networking and recruitment opportunities to increase your employability and career success. Every year, close to 5000 students are placed both locally and overseas as part of our credit-bearing internship programmes.

CAO Offers a broad range of programmes and services to help you get closer to your dream job, including:

- Career Exploration & Coaching
- Industry-Specific Career Consultation
- Online Core Career Module by MLCPS*
- Career & Employability Skills Workshops
- NTU PEAK Leadership Programme
- Credit-Bearing Internships & Work-Integrated Education
- Industry Mentorship and Job Shadowing Programmes
- Career Fairs, Recruitment Activities and Networking Events
- CareerAxis – CAO Online Portal

*Margaret Lien Centre for Professional Success (MLCPS) module aims to instil lifelong skills in you, so that you can excel in your career.

To find out more, visit www.ntu.edu.sg/cao.

“I was initially very worried about not being able to find a job amidst the economic downturn. NTU Career & Attachment Office’s career services have indeed equipped me with the necessary skills needed to secure interviews and ultimately, a job. The staff are very experienced and sincere in helping me. The coaching sessions, in particular, have helped me secure a job less than a month after the final exams. I highly recommend approaching CAO for help; their profound industry knowledge and experience will greatly value-add to your job search.”

Samantha Tan Ruo Yu
College of Science
# Admission Requirements

## Asian School of the Environment

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Minimum Subject Requirements</th>
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<tbody>
<tr>
<td>Environmental Earth Systems Science</td>
<td>H1 Level pass in Mathematics and H2 Level pass in either Physics, Chemistry, Biology, Economics or Computing</td>
</tr>
<tr>
<td>Double Major in Environmental Earth Systems Science and Public Policy and Global Affairs</td>
<td>H1 Level pass in Mathematics and H2 Level pass in either Physics, Chemistry, Biology, Computing or Economics and a good grade in either General Paper, Knowledge &amp; Inquiry, H1 Level History, English Literature or Geography</td>
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## School of Biological Sciences

<table>
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<tr>
<th>Programmes</th>
<th>Minimum Subject Requirements</th>
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<tbody>
<tr>
<td>Biological Sciences</td>
<td>At least H1/SL or equivalent pass in Mathematics and a good H2/HL/A Level or equivalent pass in Physics, Chemistry or Biology</td>
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<tr>
<td>Biological Sciences with Second Major in Biomedical Structural Biology</td>
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<tr>
<td>Biological Sciences with Second Major in Medicinal Chemistry and Pharmacology(^1)</td>
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<tr>
<td>Biological Sciences with Minor in Business Double Major in Biomedical Sciences and BioBusiness</td>
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<tr>
<td>Biological Sciences with Second Major in Food Science and Technology</td>
<td>At least H2 or equivalent pass in Mathematics and a H2 Level or equivalent pass in Physics, Chemistry or Biology OR At Least H1 or equivalent pass in Mathematics and two H2 Level or equivalent pass in Physics, Chemistry or Biology</td>
</tr>
<tr>
<td>Double Major in Biological Sciences and Psychology</td>
<td>Good H1/SL or equivalent pass in Mathematics, good H2/HL/A Level or equivalent pass in Physics, Chemistry or Biology, and a good grade in General Paper or Knowledge &amp; Inquiry.</td>
</tr>
<tr>
<td>Biomedical Sciences/Chinese Medicine</td>
<td>At least H1/SL or equivalent pass in Mathematics and a good H2/HL/A Level or equivalent pass in Physics, Chemistry or Biology PLUS at least an O Level/SL or equivalent pass in Chinese Language</td>
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## SCHOOL OF PHYSICAL AND MATHEMATICAL SCIENCES

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<tr>
<th>PROGRAMMES</th>
<th>MINIMUM SUBJECT REQUIREMENTS</th>
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<tbody>
<tr>
<td>Chemistry and Biological Chemistry</td>
<td>Good H2/HL/A Level or equivalent pass in Chemistry and either Mathematics or Physics</td>
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<tr>
<td>Chemistry and Biological Chemistry with Second Major in Food Science and Technology</td>
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<tr>
<td>Chemistry and Biological Chemistry with Second Major in Environmental Science</td>
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<tr>
<td>Data Science and Artificial Intelligence</td>
<td>Good H2/HL/A Level or equivalent pass in Mathematics and either Physics, Chemistry, Biology or Computing</td>
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<tr>
<td>Mathematical Sciences</td>
<td>Good H2/HL/A Level or equivalent pass in Mathematics</td>
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<tr>
<td>Mathematical Sciences with Minor in Finance</td>
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</tr>
<tr>
<td>Double Major in Mathematical Sciences and Economics</td>
<td>Good H2/HL/A Level or equivalent pass in Mathematics and good grade in General Paper or Knowledge &amp; Inquiry</td>
</tr>
<tr>
<td>Double Major in Mathematical and Computer Sciences</td>
<td>Good H2/HL/A Level or equivalent pass in Mathematics and either Physics, Chemistry, Biology or Computing</td>
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<tr>
<td>Physics</td>
<td>Good H2/HL/A Level or equivalent pass in Physics and Mathematics</td>
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<tr>
<td>Applied Physics</td>
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<tr>
<td>Applied Physics with Second Major in Microelectronics Engineering</td>
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<tr>
<td>Double Major in Physics and Mathematical Sciences</td>
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